

VIRGINIA WILDLIFE

DECEMBER 2002

TWO DOLLARS



Stewards of the Land
A Special Edition



Special Message From The Directors of VDGIF and VDOF

In Virginia we are quite blessed to have an abundance of natural resources. Not only do we have clean air and water and a diversity of wildlife, we are also fortunate to have a range of outdoor recreational opportunities that abound throughout the state. But as Virginia prospers and grows so does the demand being placed on those resources. With that demand, it is crucial that we all strive to have a better understanding of the benefits of sound land management and forest stewardship. Such an understanding will help each and every one of us to have a greater appreciation of the impact that our actions have on our natural resources.

In reading this special addition of *Virginia Wildlife* it is our hope that you become better acquainted with some of the important issues associated with land management. Whether it's 10,000 acres or a small plot in a backyard we are impacted by how we all treat our natural areas. Forest stewardship doesn't mean that we close our forests to protect them, but rather that we recognize and utilize these renewable resources, while still maintaining a clean and rich environment. If we are to continue to enjoy the rewards of our forests, streams, rivers, and lakes and the wildlife and fish that live within them, it will be up to all of us to be good stewards and to practice good conservation ethics both today and for years to come.

William L. Woodfin Jr.
Director, Virginia Department
of Game and Inland Fisheries

The term "Stewardship" means many things to many people. That's why it is so appropriate to call our approach to resource management "Forest Stewardship." Our forest resource means so many things to so many people. The program and philosophy is not single focused. Forest Stewardship is the implementation of a plan for nurturing these interrelated resources. Forest Stewardship recognizes that we do not have to have forest products at the expense of wildlife, clean water, recreation, or endangered species. Forest Stewardship does not mean we must "lock up" our forests, thinking (or hoping) they will stay in their present state forever. Forest Stewardship means a high level of concern for all the resources that abound in our woodlands.

We should be proud of our accomplishments in Virginia. In an 11-year period, more than 6,000 landowners have had management plans prepared and are actively carrying out conservation practices to reach their objectives for their woodlands. Over 200 forest landowners have been certified as Stewards of the Forest. They have dedicated themselves and their land to a better environment and ecological integrity as well as our economic well being. These landowners should be saluted for their unselfishness and their vision of a better 21st century.

James W. Garner
State Forester—Commonwealth
of Virginia

Mission Statement

To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; to provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation; to promote safety for persons and property in connection with boating, hunting and fishing.

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Mark R. Warner, Governor

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Color separations and printing by Nittany
Valley Offset, State College, PA.

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About the cover: The vast forests of western Virginia and the area around the Great Dismal Swamp National Wildlife Refuge support a growing population of American black bears (*Ursus americanus*). Adult male black bears are 5 to 6 feet long, 2 to 3 feet high, and weigh 100-400 pounds. They eat a wide range of food, including grass, berries, acorns, and even insects. Photo ©Bill Lea.



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Stewards of the Land

*A special edition devoted to the people caring
for our forests and wildlife.*

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The staff of *Virginia Wildlife* magazine would like to recognize David Coffman for his assistance with the conception, design, editing, writing, and photography of this special issue.

Lee Walker, Editor

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Dedicated to the Conservation of Virginia's Wildlife and Natural Resources





A Gift That

by Irv Kenyon



We've all received them on occasion—Christmas gifts given with good intentions and best wishes but lacking the qualities that will make them last. Some will break or soon wear out, get stepped on, or be quickly set aside and eventually forgotten.

Gifts that do endure, on the other hand, are often those of our own choosing that begin with an inspiring concept and reach fruition by sound planning and solid commitment. For many landowners such a

gift, given to themselves and future generations, can be theirs for the asking.

Owners of 10 or more acres of forestland looking for something really special this year might like to treat themselves to the possibilities contained in a creative and comprehensive forest management package. It's called the Forest Stewardship Program. Wrapped in the image of Aldo Leopold's land ethic, Forest Stewardship will appeal to those landowners who would like to apply sound management to all of their natural resources, but would also enjoy deciding which of these receives the greatest attention. For-

The Forest Stewardship Program helps landowners manage much more than trees. Other resource values are considered with the help of specialists from state, federal, and conservation organizations. The program guarantees that the special qualities of the land are protected and sustained for future generations.

est Stewardship takes the approach to natural resource management that one would the arrival of a litter of puppies: It's all right to pick a favorite or two, but none can be neglected.

Within the total Forest Stewardship package are individually wrapped items that will catch and inspire the interest of almost any woodland owner. Individual con-

sideration is given to timber, wildlife, soil, water quality, outdoor recreation, and the protection of unique natural and historical environments. Each of these natural resource treasures comes complete with instructions, in the form of a written plan and technical assistance from professional natural resource managers to help achieve satisfying results. Not even L. L. Bean's Christmas catalog can offer anything this grand.

The Virginia Department of Forestry (VDof) reports that over 77 percent of the state's forest land—11 million acres—is individually owned, placing this vast amount of the state's timber and associated resources in the hands of over 400,000 individual landowners. Most owners have no detailed plan for the management of their natural resources. And many have no idea of how or where to start developing such a plan. Some owners assume that their forests are doing well without even bothering to look closely, not realizing that neglect can result in serious consequences. Still

Program, ownership must include 10 acres or more of forested land. The definition of "forested" is pretty broad, so don't despair if you don't have 10 acres of prime hardwoods or similar acreage in tall, whispering pines. Considering the theme of this message, a few Christmas trees would be appropriate of course but not required. Even open land, if plans are to begin forestation, will help your property qualify.

In addition to plan preparation and technical assistance, cost sharing for implementing approved practices is often available through various state and federal programs. (Even Ebenezer Scrooge would have liked this.) Eligibility for any cost share program *does* require there first be a current management plan approved by an appropriate natural resource agency before conservation practices are implemented. Landowners should contact their local VDof forester for details on which program(s) will be best suited to their situation.

Landowners entering the Stewardship Program are required to

sign a nonbinding pledge to uphold the Stewardship principles. The signed pledge serves as evidence that the landowner's intentions are sincere and that he or she is ready to have the forester and other resource managers proceed.

The "star at the top of the tree" for program participants that have adequately met the requirements is Forest Stewardship Certification. Certification gives qualifying landowners well-deserved recognition and considerable "bragging rights."

Properly received and carefully kept, the gift of Forest Stewardship will become a lasting favorite. It won't break or fall apart, and will be stepped on only as a source of pride. Properly managed, the aesthetic, recreational, and economic values found in Virginia's woodlands are gifts to be enjoyed by current landowners and passed to future generations. Participation in the Forest Stewardship Program offers long standing rewards in satisfaction—a gift that endures.

Merry Christmas! □

Irv Kenyon is a retired wildlife biologist from VDGIF. He began his 31-year career as a game warden and after seven years joined the Wildlife Division as a wildlife biologist, managing and conserving the states abundant natural resources and wildlife. The article "A Gift That Endures" has been revised and abridged from the December 1992 issue of Virginia Wildlife.

Endures

others, those not interested in harvesting their timber, may fear that a resource management plan prepared by a forester or other natural resource specialist is the preamble to a logging contract. Forest Stewardship, including the management plan, takes into account each landowner's wishes and all can feel confident that their personal values will not be compromised.

To be eligible for the Stewardship

A Forest Stewardship Management Plan is designed to consider the effects of any decision on all the resources—natural, historic, and recreational, while achieving the landowner's economic, environmental, and aesthetic goals.



©Robbie May, VDof

Virginia's Stewards of the Forest



by David Coffman



Forestland in Virginia is disappearing at an alarming rate. Recent surveys have shown that more than 60,000 acres of forestland are lost each year. This is not from the cutting of trees for forest products such as lumber, paper, or firewood, but rather the conversion of forestland to house sites, shopping centers, roads, and other development purposes.

More than 77 percent of our remaining forestland is owned pri-

vately by an estimated 400,000 individuals. Land ownership is one of the most valued rights of American citizens; however, ownership also carries with it the responsibility of good stewardship. How these private landowners manage their forests today will determine the future of forests—and wildlife—in Virginia tomorrow.

In recent years there has been a dramatic change in ownership patterns, landowners' objectives, and attitudes. Many new owners are from urban areas and not familiar with services offered by conservation agencies or they are reluctant to "manage" resources for fear of harming the environment. Many forest landowners do not have a

forest management plan prior to harvesting their timber, nor do they seek any technical advice.

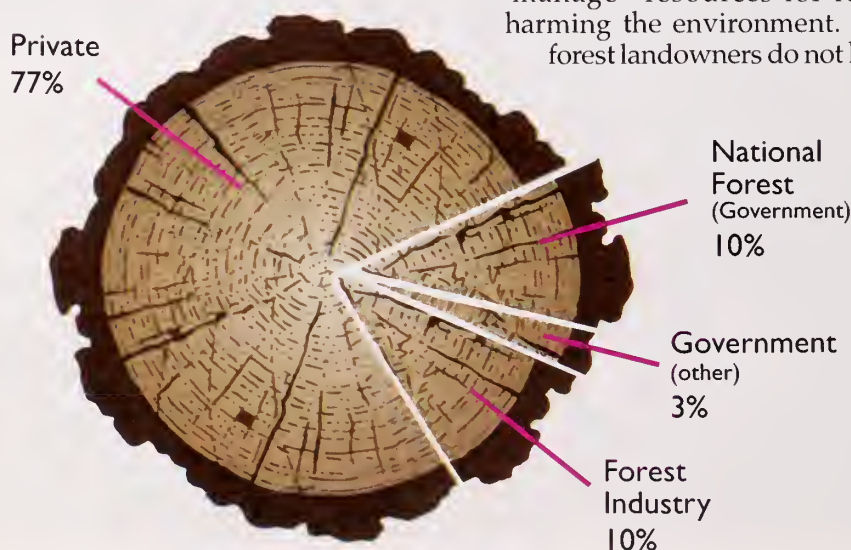
To improve the management of private forestlands, the Virginia Department of Forestry (VDOF) has developed a Forest Stewardship Program in cooperation with other natural resource conservation agencies, consulting foresters, forest industry, and woodland owners' associations. This state program is part of a nationwide effort developed in 1990 by the National Association of State Foresters in cooperation with the USDA Forest Service.

The Forest Stewardship Program is aimed at landowners with 10 or more acres of forestland, and pro-



©Robbie May, VDOF

Timberland Ownership in Virginia



15,447,550 Total Acres

vides technical assistance and financial support to help them manage their lands for wildlife habitat, timber production, recreational opportunities, natural heritage, and historic resources.

It is hoped that this magazine will spark your interest in protecting, preserving, and wisely using the many resources found in the forests. Conservation professionals are eager to assist you in understanding some of the complexities surrounding natural resource management. We hope that you who are fortunate enough to own land will become more thoughtful about your land use plans and practice forest stewardship. □

David Coffman is the former Conservation Education Coordinator for the Virginia Department of Forestry in Charlottesville.

No Man Is An Island

by Karen Terwilliger

The Forest Stewardship program is the most comprehensive forestry program to date. It is a chance to look beyond the timber value of each tree to the overall value of the forest itself; to see the forest through the trees.

The chief benefit of this program is that it allows landowners to blend many of their goals and objectives into one plan with the help of natu-

“Picture how your wooded ‘patch’ fits into Virginia’s forested quilt. Ask that critical question, ‘What do I have on my property that is special and should be maintained for the diversity of our landscape and our rare plant and animal communities?’ Thinking beyond the boundaries, I believe, is the beginning of true land stewardship.”

opportunities. The Coastal Plain, with its extensive wetlands, is critical to water quality. Providing for forested wetland buffers is not only sound environmental control and water quality assurance, but also provides critical habitat and travel corridors for wildlife. These coastal forests play a vital role in the bird migration along the Atlantic Flyway. They provide our long distance flyers needed places to rest and feed along their intercontinental journey. As a mid-Atlantic state along this major pathway for bird migration, Virginia’s forests provide wildlife habitat important to many songbird

and raptor species during each season of the year.

Riparian management, which goes beyond Best Management Practices (BMPs) and allows for the widest buffers possible along streams and rivers, provides good breeding habitat for bottomland hardwood bird species, mammals, reptiles, and amphibians. For example, the Northwest River and North Landing River systems are critical to many rare and endangered species, such as the big-eared bat, canebrake rattlesnake, Dismal Swamp shrew, and several plant species, which have evolved within the coastal wetland system and the Great Dismal Swamp. However, there is only one Great Dismal Swamp in the world, and our Atlantic white cedar, pond pine, pine barrens, forests, and old growth loblolly stands are scarce. Large, mature hardwood forest areas are also rarer than they have been in Virginia’s history.

The more we can create and maintain these declining habitats in our coastal landscape, the better able we will be to meet the wildlife, soil, water, recreation, and aesthetic objectives of the broader coastal perspective. Landowners can be pre-



The Cape May warbler, a neotropical visitor that is often seen resting and feeding along the mountains and forests of western Virginia.

ral resource professionals from all disciplines. But to me, the most intriguing and challenging aspect of the program is the opportunity to cross artificial land ownership boundary lines and view forests as part of the broader landscape of Virginia.

Forests are part of the “fabric” of our landscape. Taking a bird’s eye view of each region (or physiographic province), for example, offers unique forestry management

Forest stewardship involves thinking beyond the boundaries of your own land. It includes leaving riparian areas, which protect water quality downstream providing critical habitat for wildlife and plant species.



©Dwight Dyke

sented with the concept that their "little piece" is a major contributor to a larger forest diversity for the Coastal Plain and its important role along the Atlantic Flyway.

The same is true for the Piedmont, where the landscape begs for the added diversity component of large hardwood tracts, wider riparian zones, and wider wildlife corridors. Granted, most of the landowners (and, therefore, Stewardship Plans) will deal with making the best out of loblolly pine management; but whenever a chance exists to encourage or manage the rare habitats, the landowners should be made aware of this opportunity to enhance wildlife diversity, soil, water, recreation, and aesthetics.

Forest management in the mountains can also provide forested migration corridors for neotropical birds as well as general wildlife diversity. Many unique caves, karst areas, and freshwater streams exist where the management of riparian zones to protect the rare species in these habitats could be coordinated between landowners along the

stream watersheds. The scarce spruce, fir, and hemlock stands support rare plant and animal communities found nowhere else in the state, such as the northern flying squirrel, Appalachian water shrew, and rock vole.

In summary, it is important to understand the concept of providing forest and wildlife diversity not only

on your own property but also on the larger landscape level. Most often you will find that both can be accomplished at the same time. Knowing that your forest management has significance at the local level, as well as on a larger natural resource scale, is part of the reward of participating in the Forest Stewardship Program.

Picture how your wooded "patch" fits into Virginia's forested quilt. Ask that critical question, "What do I have on my property that is special and should be maintained for the diversity of our landscape and our rare plant and animal communities?" Thinking beyond the boundaries, I believe, is the beginning of true land stewardship. □



©Dwight Dyke

Cool, clean water and fine fishing holes are just two of the benefits that come from practicing good forest stewardship.

For over 25 years Karen Terwilliger has been involved in regional and national conservation. She worked for 15 years with VDGIF developing the Department's Nongame and Endangered Species Program. Currently Karen is a nature conservation consultant on Virginia's Eastern Shore and can be reached at 757-787-2637. The article "No Man Is An Island" is reprinted from the December 1992 issue of Virginia Wildlife.

©Jim Wilson



A Forest Never Stands Still

by Irv Kenyon

Addressing a group of owners of forested land awhile back, I was trying to impress upon them how change in the size and composition of plants over time will have a major impact on the wildlife present. One gentleman, citing the recent disappearance of quail from his property that had been "clearcut" years earlier and then had allowed nature to take its course, took exception. "I've done nothing," he said. "Nothing has changed."

Not likely. Change within a forest, sometimes swift, sometimes centipede slow, is as fundamental as

Dealing with change in a forest is the essence of responsible forest management.

fur on a fox. Intervention by man or extreme natural events may speed, slow, or otherwise alter the process, but change is certain.

Natural change in a forest occurs largely as a result of age. It is a process that foresters call natural



Wild turkey: ©Glenn "Tink" Smith

Above: Wild turkey thrive in managed forests. Below: Renowned nature and wildlife artist Jim Wilson shows a forest is a living and ever-changing environment.



succession. Not unlike our own lives, or those we observe around us, forest change is at first rapid and vigorous, slowing as it reaches middle age, and finally reaching maturity when further change may only be noticed by its loss of vitality or other problems that accompany old age.

Clear-cuts, or cutovers, as well as newly established plantations, represent forests in their earliest years. Here tree seedlings or stump sprouts share, for a brief time, their open, sunlit stage with a vast array of other plants—grasses, wildflowers, shrubs, and vines. With age, the trees begin to play their dominant role and share their celestial spotlight with fewer and fewer members of the earlier supporting cast. Many of the original wildlife members also soon disappear (including the gentleman's quail). Waiting in the wings to make their appearance, however, are other wildlife and plant species—those that find their place in the sapling and pole-sized timber stands. These stands, allowed to succeed naturally, will become the mature timber stands that we much admire.

That aging, thus change, is a natural occurrence, raises the question of man's intervention. Man cannot control every natural occurrence in the woods, nor probably should he have such broad power. Some preservationists would argue that it is better to allow the natural process to take its course, a choice that is to be respected. Yet, with much of Virginia's forestland being claimed by subdivisions and shopping malls, we can ill afford this approach on a very large scale. The economic importance of Virginia's forest industry and the wholesale demand for forest products cannot be denied. By

A "shelterwood" harvest allows increased sunlight to trigger desirable hardwood species such as oaks to regenerate by stump sprouts or by seeds that may have been lying dormant on the forest floor. Reseeding logging roads with warm season grasses helps to prevent soil erosion and enhances edge habitat by providing food and cover for deer and other animals.



©David Coffman, VDOF

The greatest threat to Virginia's forests is not insects, disease, or harvesting, but irrevocable loss to human development.

our own growing population, we place increasing demands on remaining forestlands and their associated resources and benefits. With forestland declining at a rate of about 60,000 acres each year in Virginia, present-day foresters and progressive landowners recognize the need for responsible, active forest management.

Current forest management must stress not only the production of timber, but also the welfare of other forest community members—wildlife, soil, and water—and the aesthetic and recreational values a forest provides.

The most difficult change for



©Bill Lea



©Bill Lea

some people to deal with is that brought about by harvesting timber, or logging. Certainly, the picture of recently clear-cut woodland will never make an album of America the Beautiful. Yet the result of this practice, though undesirable to the eyes of some, has brought income to the landowner, contributed to a major industry, and provided an increased diversity of wildlife habitat. Also, unless put to another use, a new forest will soon be in the making. Not as dramatic as clear-cutting, thinning and individual tree selection are other harvest methods

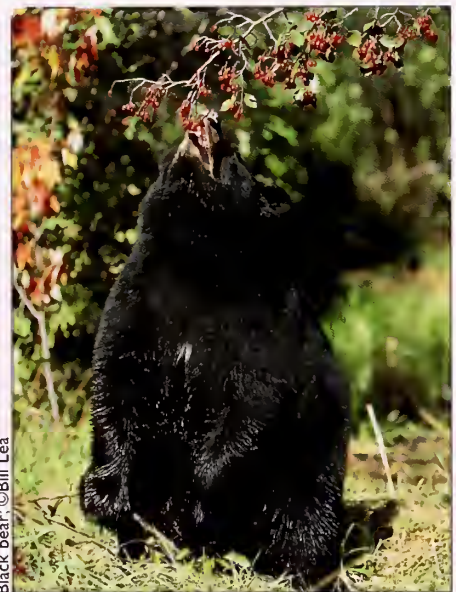
Sometimes the fear of negative impacts due to timber harvest is greater than reality. The continued existence of one of the most extensive and brilliant displays of wildflowers in Virginia occurs on forestland with a long history of selective timber harvest. This cherished woodland show, featuring large-flowered trillium, takes place each spring on the Virginia Game Department's G. Richard Thompson Wildlife Management Area in Fauquier County. More recently, even small scale clear-cutting in areas harboring trillium has not had any noticeable impact in reducing this plant's colorful May Day parade. Indeed, these plants, as certainly many others do, may benefit from occasional soil disturbance, such as that brought by logging.



Large-flowered trillium: ©Dwight Dyke

Selective timber harvest and clearcutting management techniques used in the G.R. Thompson Wildlife Management Area have played a role in maintaining the spectacular display of wildflowers and wildlife. Scientific forest management has also enhanced wildlife habitat creating one of Virginia's best wildlife and bird watching areas.

Clearly there is the need to maintain some forestland in old growth. Such stands are magnificent to behold and are essential to the well being of other forest members. Many of the more secretive migrating songbirds require large, uninterrupted, old age forests during their stay in Virginia. Certain plants,



Black bear: ©Bill Lea

some of them rare, will grow only where well shaded by the uninterrupted canopy a mature forest provides.

Dealing with change can be far easier if the outcome and benefits are known. Recognizing that change in a forest is inevitable, every woodland owner should have a forest management plan, which will assist with understanding and responding to change as it occurs.

Indeed, recognizing and influencing the natural course of events in a forest is the essence of responsible forest management. For many years, however, owners of small timbered tracts have viewed having a forest management plan with the urgency that most have for planning ahead for the management of their jackpot lottery winnings.

Far left: Pine plantations are not "wildlife deserts." Deer, turkey, quail, and other animals use these areas in the early stages for food and cover. Left: Around age 18, many pine plantations are thinned to provide an additional income to the landowners and increase the growth on remaining trees. The increased sunlight to the forest floor produces a flush of succulent vegetation enhancing the food source for a variety of wildlife species. Using irregular shapes and keeping harvested areas under 50 acres in size provides optimum "edge" habitat valuable to many wildlife species



Lee Walker



Fortunately, another change, a heightened interest in actively managing woodlands, particularly small tracts, is at hand. With a big boost from the Forest Stewardship Program, interest in planning the management of such tracts has recently

been rising, like the March sap in a Highland County sugar maple. Forest Stewardship plans have been developed for over 6,000 Virginia landowners since the program began in 1991. This is a welcome turn of events. According to the Vir-

Sound land management practices not only benefit trees and plants, but also offer excellent habitat for a variety of wildlife species like quail and enhances many outdoor activities like hunting.

ginia Department of Forestry, most of these plans are for owners of a hundred acres or less. Even owners of as few as 10 acres of forested land may qualify for the program. For more details on the Forest Stewardship Program, see "A Gift that Endures" in this issue.

As we've all heard, neither time nor forests stand still. By realizing this and understanding the associated changes that will occur, landowners are better prepared to make sound and more predictable forest management decisions.

It's all a matter of dealing with change. □

Irv Kenyon is a retired wildlife biologist from VDGF.



If You Want Fauna, You've Got To Have Flora

by King Montgomery



Use and conservation of the state's forest resources are the main purposes of the Virginia Forest Stewardship Program. Although the program is officially an effort of the Virginia Department of Forestry (VDOF), it is a cooperative program that demonstrates the strengths of coordinated conservation efforts when public and private organizations work together. Various state departments not only work closely together within the program, but they are joined in the process by the federal government, academic institutions, the private sector, conservation and professional associations, and landowners.

This success story began in 1990, when numerous players started helping Virginians take advantage of timber production, while actively promoting wildlife habitat improvement, soil and water conservation, outdoor recreation, and the protection of unique or historical environments.

Above: Wild columbine.
Right: A Forest Stewardship Plan often provides guidelines for improving both timber and wildlife resources, while always looking to the future.

Wild columbine. ©King Montgomery



Virginia is fortunate that almost 66 percent of Virginia remains covered with forests, while the nation is only 25 percent forested. About 77 percent of our forestland in Virginia is owned privately by an estimated 400,000 people. Landowners with 10 or more acres of land may apply to

the Department of Forestry to participate in the Forest Stewardship Program. The Department of Forestry will work with landowners to develop a comprehensive, long-term forestry management plan based on the owner's desires for what he or she wishes to derive from the land, and for those seeking to manage their lands for the sake of wildlife and habitat, the Virginia Department of Game and Inland Fisheries (VDGIF) will help them develop a management plan for their specific needs. Landowner objectives could be in aesthetics, recreation, water quality, wildlife habitat, financial gain, or more likely, a combination of these goals. Foresters are available in every county to provide management plans for woodland owners. Some tax benefits and cost-share incentive programs require a Forest Stewardship Plan to ensure the landowner's commitment to conservation practices in return for financial benefits. There may be a modest fee for this service. Contact your local VDOF office for current information.

The Plan

Qualified, professional foresters, working with landowners on-site, conduct a resource inventory of tree species composition, age, growth rate, marketability, and wildlife habitat conditions, which results in a recommended plan for the property.



Lee Walker



Above: Resource specialists from different disciplines collaborate on the development of Forest Stewardship Plans, providing recommendations and technical assistance in implementing conservation practices based on the landowner's objectives.

Other professionals such as wildlife biologists provide expertise as needed to meet the landowners objectives. Multiple uses of the entire forest are considered, with an eye to improving all aspects of the ecosystem, including timber production, which can provide owners a source of income, tax incentives, some cost sharing, and other financial considerations.

The plan will also recommend methods of protecting and enhancing water quality, particularly through control of soil erosion and preservation of forested areas along streams called "riparian forest buffers" or streamside management zones.

Riparian buffers provide wildlife habitat, but they can also be critical for developing and maintaining aquatic habitat, and this is where VDGIF makes a significant contribution. Wildlife and aquatic biologists from VDGIF augment the foresters' plan by looking at how best to improve habitat for game and non-game species of wildlife, and by evaluating streams, rivers, ponds, and lakes on the property for better fish and waterfowl production.



©King Montgomery

Unchecked by predators, beaver populations often cause flooding and costly damage to trees.

The program provides options for landowners who choose the path of conservation. The Forest Stewardship Program is an encouraging step in reversing the loss of valuable woodland while still allowing landowners to reap some of the financial benefits that might come from other land use choices. The program positively affects all of us, landowner and non-landowners alike.

How It Works

I belong to a rod and gun club that owns woodlands and several large

ponds in the Tidewater area of the state. In the early 1990s, not long after the inception of the program, we applied to the Department of Forestry and qualified as a Stewardship Forest. An area forester from VDOF met with our club and a five-year forestry management plan was drafted.

It's a fairly comprehensive document, contained in a three-ring notebook binder, with a map color-coded as to tree type, recommendations for steps to be taken each year to enhance the land and waters, and other valuable information on habitat improvement and soil and water conservation.

VDGIF personnel surveyed the ponds, riparian areas, and woodlands, and provided valuable recommendations to enhance the habitat for our resident populations of deer, quail, and wild turkeys, and

"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."

- Aldo Leopold,
A Sand County Almanac

migrant populations of geese, wood ducks, and other waterfowl. The ponds were studied and sampled and suggestions given to ensure continued health of the aquatic ecosystem and its relationship to the surrounding lands.

The Department of Forestry recommended that several timber stands be harvested to allow undergrowth to regenerate, providing suitable habitat for wildlife. Another area was to be reseeded with pine. Yet another required the planting of trees and grasses to prevent soil erosion from water runoff, and provide food and cover for deer, quail, and other wildlife. And each year the plan is reviewed and updated out to another five years.

As a result, our club forests are home to an abundance of creatures,

large and small, that provide opportunities for hunting or just plain watching. The ponds harbor diverse populations of fish, insects, beavers, otters, herons, ospreys, ducks, and geese. The trees are home to songbirds and squirrels, and raccoons and foxes patrol the forest edges and the small streams that drain into the ponds. Buzzards ride the thermals above the club, policing the dead and decaying. The hunting is great, the fishing better than great, and the tranquil green of the area appeals to everyone, providing oxygen and a sense of calm, two ingredients essential to a long, happy life.

When it came time, early in the



©Dwight Dyke

spring of 1996, to plant trees and grasses on part of the property where loggers had cut access routes through the forest, the area forester brought tree seedlings and grass seed we had ordered through their "Seedling Catalog." The VDOF has been in the seedling production business for over 90 years and, when you buy the inexpensive plants, you know you are getting the best stock available, suited for the soil and climate in your part of Virginia.

Our management plan was tailored for the management and wildlife needs of the club. The point to remember is that the attention the club received and the resources we



Great blue heron. ©King Montgomery



©King Montgomery

The ability to view and interact with wildlife is often cited as a primary objective for forest landowners and popular for many visitors to public lands.

drew on to put our plan into action are available to eligible private landowners.

Living Downstream

"But," you say, "I'm not a 10-acre landowner; what's in it for me?" By wisely managing private forests, each landowner's plot of woods can also be seen as a piece of a larger patchwork quilt all of us benefit. Our waters running into, through, and out of managed forests remain

clearer and cleaner because good soil and water conservation is an important part of the Forest Stewardship Program. This increases opportunities for hunters, anglers, or bird and animal watchers because, under the program, the habitat is improved, making food and shelter for the animals more plentiful and of better quality.

Recommendations for insect control limit the spread of disease to surrounding areas. So, while property lines convey meaning for land, they do not confine these benefits to finite plots. Rehabilitation of a community always has positive downstream effects.

Similarly, there is no demarcation between air, land, water, and people. We are all an integral part of the greater whole, and a glitch in one of the parts causes problems in the others. Fortunately, for Virginians at least, there is a way for landowners to harvest some trees without adverse affects. The Forest Stewardship Program helps us to do the right thing for the environment, others, and ourselves.

Writing three years after Gifford Pinchot's death in 1946, Aldo Leopold, in *A Sand County Almanac And Sketches Here and There*, said that "Like winds and sunsets, wild things were taken for granted until progress began to do away with them. Now we face the question whether a still higher 'standard of living' is worth its costs in things natural, wild, and free." For many, "...the opportunity to see geese is more important than television, and the chance to find a pasque flower is a right as inalienable as free speech."

Under President Theodore Roosevelt, Pinchot was the nation's Chief Forester. Leopold was a forester, wildlife ecologist, conservationist, educator, and environmental philosopher. For those who want to join their great conservationist tradition, the Forest Stewardship Program is a good place to start. □

King Montgomery, an award winning freelance outdoor writer and field editor for Virginia Outdoor Weekly, lives in Annandale and is a regular contributor to Virginia Wildlife.

The Forest and You

by Carol A. Heiser and David Coffman
illustrations by Spike Knuth

We've all heard the frequent news reports about the unrestrained development and rampant urbanization of Virginia, but how often do you hear the good news that forests still cover two-thirds of the state? Seventy-eight percent of these total forested acres are made up of hardwood species—the most abundant being yellow poplar—with the other 22 percent being pine types. Much of Virginia's forestland contains commercially productive timber, the majority of which—77 percent—is privately owned. The forest industry owns 10 percent, and the remaining 13 percent is owned by federal, state, and local governments. These forests represent a significant asset that is aesthetically and economically valuable, and the standard of living we currently enjoy can be attributed in part to the abundance and stability of this living resource.

Forests have different values to different people. There is the intrinsic value of undeveloped forest land, appreciated for its beauty and wildness. There is the economic value as well. Wildlife and forest recreational values alone contribute more than \$3 billion annually to Virginia's economy. Income is derived from timber sales, hunting, fishing, and recreational leases. Timber harvesting contributes \$863 million annually, and other minor forest products contribute over \$60 million annually.

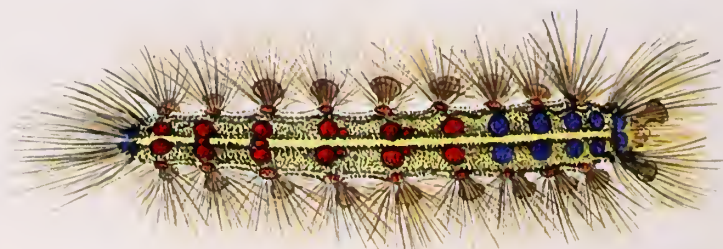
Nearly every county in Virginia has some type of wood-using industry. Back in 1940, the state's timber resource could only build two

million homes; today we have enough timber for six million. Whether we value our forests for their beauty or their utility, we must recognize that they provide a remarkable and renewable natural resource that will benefit future generations.

Virginia State Forests: Like Money in the Bank

The Virginia Department of Forestry (VDof) manages 16 parcels of forestland in the State Forest System totaling over 52,000 acres. These 'working forests' are intensively managed to sustain a number of resource benefits including wildlife habitat, recreation opportunities, watershed protection, timber products, and preservation of natural areas and historical sites. Special uses include pine seed orchards for producing genetically improved tree seed for reforestation, sites for long-term applied research, environmental education, and preserving biodiversity.

The state forests are 'self-sustaining'. They are managed at no cost to taxpayers, deriving revenue from the sale of forest products: posts, lumber, and hunting permit fees. Each State Forest operates under a 10-year comprehen-



Gypsy moth caterpillar

Wild in the woods

sive conservation management plan. Certain areas are designated for special uses and forest products production. Approximately 17 percent of State Forest lands are designated as special areas to provide recreation, critical wildlife habitat, unique natural area preserves, and protection of wetlands, cultural, or historic sites.

The state forests are a stewardship success story. The majority of the lands initially acquired from 1919-1939 in the southern Piedmont region were unmanaged, unproductive, abandoned, eroded acres. Through careful stewardship and application of scientific natural resource management practices the 'worthless' properties have been restored to productive, healthy forests offering a multitude of diverse benefits to all Virginians.

For detailed information on the location of individual state forests and the benefits and activities they offer, visit our Web site www.dof.state.va.us or contact the State Forest Office in Cumberland at (434) 492-4121.

Forest Health: What's Bugging Your Trees?

Healthy trees, like healthy people, are able to tolerate a certain amount of hardship. Forest communities include trees and countless other organisms that compete for space, light, water, and nutrients. A healthy tree that is growing well can lose a few leaves or twigs or rootlets without suffering any long-term harm. But if something like a storm or drought or insect outbreak causes an unusual amount of injury then a tree has to use much of its energy to repair the dam-

Virginia's State Forests are working forests with special areas dedicated for applied research and management demonstration projects. Pine tree improvement and the restoration of the American chestnut are two popular programs that will benefit Virginia's forests in the future.

age. This makes it weak. Weak trees are not as able to tolerate competition, and they become more susceptible to pest attacks. When trees die in the forest it's usually because competition or environmental stress makes them unable to tolerate or resist pest attacks. Among Virginia's most common and damaging forest health concerns are adverse weather, bark beetles, root disease, and introduced pests.

Drought has been a major problem for the past few years. Water must move from the soil through roots and stems and out through the leaves in order for trees to make food, obtain nutrients, and keep tissues alive. When water becomes hard to get trees lose their resistance to pests, and when water is no longer available cells dry out and die. Other damaging weather

problems include ice storms, hail, strong winds, floods, late or early freezes, and large, rapid changes in temperature.


Bark beetles feed in the areas where stems are growing most rapidly. There are dozens of species. One of the most damaging is the southern pine beetle. During periodic outbreaks it kills thousands of pine trees by feeding in the bark and introducing fungi into the stem. Because it spends most of its life inside the tree it is very difficult to control. The most effective treatment is to remove all infested trees while the beetles are still inside.

Most root diseases are caused by fungi that live in the soil on dead or weakened root systems. One common species is called shoestring root rot because it produces long, thin growths under the bark of roots and stems. It can infect almost any kind of tree that becomes weak. Another common root disease is called annosum root rot. It infects only pine trees and can sometimes invade the roots of trees that are moderately healthy. Root diseases usually kill trees slowly whereas bark beetles kill quickly.

Pests from foreign countries can be especially damaging because natural control agents

Left to right: Female gypsy moth and larvae; male gypsy moth and larvae.





in this country are often not effective against them. Many of our worst pest problems result from introduced insects, pathogens, and weeds that reproduce quickly, displace native species, and cause widespread damage. The gypsy moth is one such pest that came from Europe many years ago. Its caterpillars consume the leaves of most tree species and strip huge areas of forest bare of foliage each spring. This weakens the trees and makes them susceptible to bark beetles and root disease, which lead to extensive tree mortality. Another such pest is the hemlock woolly adelgid, which came from Asia and has already killed tens of thousands of hemlock trees in Virginia and elsewhere. No treatment is available for protecting hemlocks in the forest, and we could lose them all.

The best way to protect forests against pests is to make sure each tree has all the light and space it needs to remain healthy. This is usually accomplished by planting trees at appropriate spacing, thinning trees as they grow larger and removing trees that are diseased or of poor quality.

Wildfire and Your Home

Keep your woodland home out of the line of fire by practicing safe prevention techniques. Fire that occurs around a home can spread and threaten other buildings or homes, and it is wise to clear an area at least 30 feet wide around all structures. Ensure that your roof is made of fire-resistant materials, and regularly remove leaves and pine needles from the roof and gutters so they will not be set afire by blowing sparks or embers. Check that outside water spigots are in good working order and that at least 100 feet of garden hose is readily accessible. Firefighters will need easy access to your home when they respond; be sure your house address is clearly displayed and visible from the road, and that your driveway is able to accom-

Dead hemlocks killed by infestation of the woolly adelgid.

moderate fire-fighting equipment. Personal protection can not be overemphasized: leave immediately if a fire becomes life threatening or if fire officials give evacuation orders. Leave nothing to chance!

Smokey Bear Says...

Each year in Virginia, wildfires cost hundreds of thousands of dollars to control and protect homes, and approximately 2,000 fires burn an average of 10,000 acres of forest land. Ninety-nine percent of these wildfires are caused by people, and Smokey Bear's old adage still rings true: "Only YOU can prevent forest fires!"

Early spring is the driest part of the year when wildfires are most likely to occur, and this time of year is referred to by foresters as "fire season." The winds of winter have dried out leaf litter on the forest floor, and there is very little green vegetation growing yet. Virginia, therefore has a 4:00 p.m. **burning law** that goes into effect February 15 and extends through April 30. During this time, all outdoor fires are unlawful before 4:00 p.m.—including camp fires and rubbish fires. Contact your county forester for other information relevant to your area, or visit the VDOF Web site.

Opportunities

For most forest landowners, their woodlands are more than a 'place', they represent an opportunity to give back to the land and care for it in a way that it can be sustained to benefit

the next generation. Forest Stewardship is an attitude, a responsibility to practice conservation. For many landowners the complexities of natural resource management are overwhelming. There are also many people who although they do not own property directly, recognize their responsibility to conserve resources and the importance forests play in our quality of life and want to know more about their environment and how to sustain it.

Through the Forest Stewardship Program, numerous agencies and conservation organizations have developed cooperative programs to educate landowners and interested citizens in a variety of topics. To simplify scheduling and promoting the large number of events, a newsletter and Web site have been developed by the Virginia Tech College of Natural Resources, Department of Forestry, Cooperative Extension Service. The *Virginia Forest Landowner Update* newsletter is published three times a year and distributed to nearly 20,000 subscribers. There is no charge for the publication. The newsletter and Web site feature events, news, and information promoting the stewardship management of forests and related resources. Cooperating agencies and organizations post a variety of workshops, conferences, field days, bus tours, short courses, and programs scheduled. Event dates, a brief description of program topics and contact \ registration information are listed. The site also includes features and reviews on current conservation issues, new programs, services, and materials available. To obtain a subscription or review upcoming opportunities, visit the Web site at www.cnr.vt.edu/forestupdate.

Virginia
Naturally

Did You Know? All About Rain Gardens

When a thunderstorm rolls over your neighborhood, the first one-inch of rainfall washes a sudden flush of nutrients, chemicals and soil particles off of lawns, fields, roofs, and roads. These pollutants end up in our creeks, streams, and rivers and degrade water quality and wildlife habitat. A rain garden (see illustration below) is a cost-effective way to remove pollutants from the runoff that flows through your property, such as the nitrogen and phosphorous found in fertilizer, heavy metals produced by auto emissions, and sediment from bare soil.

A rain garden is not a "water garden" or pond, which is a permanent pool of deep water. Instead, a rain garden is a shallow basin or depression that you construct in a low-lying area or swale, where water tends to flow through during a storm event or periodic rainy spells. The basin is only six inches deep in the center and holds water for no more than four days. The "secret" ingredient is vegetation. The roots of shrubs, small trees, and perennial species that you plant in the garden soak up the water that temporarily pools there. While the plant roots and the mulch around them absorb and filter out any pollutants, other materials like rock help to slow the water down and release it gradually, reducing its erosive effects.

For more details, see the Department of Forestry's Web site or Virginia Naturally at www.vanaturally.com.

A rain garden collects runoff from rain storms and holds it for up to four days, allowing the excess water to drain slowly. The standing water can then be absorbed by plants, thus reducing erosion and pollutants going into streams.





The yellow poplar, or tulip tree is an abundant, fast growing, pioneer species found throughout Virginia. This "soft" hardwood tree is used for making furniture and flake board, which is used in home construction.

Learning More...

The Virginia Department of Forestry, headquartered in Charlottesville, offers numerous publications and educational materials for landowners, homeowners, teachers, and other citizens. Your county forester may have some of these items on hand in their local office: you can find the local VDOF number in your phone book's "blue" pages or government section. In Charlottesville, contact the Department's Education Coordinator at (434) 977-6555, or visit the Department's Web site at www.dof.state.va.us.

Below is a sampling of Department of Forestry resources:

For Landowners and Homeowners...

Forest Trees of Virginia booklet, a guide that describes trees and their leaves. A single copy is \$5.00; quantities of 100 are \$1.00 each. Call the education coordinator for details.

For Teachers and Other Educators...

Project Learning Tree, an interdisciplinary curriculum about trees and forest ecology for educators of grades pre-K through 12. An introductory activity guide and secondary school modules are available by attending a free work-

shop. Call the education coordinator for details, or visit the Virginia Project Learning Tree Web site at www.cnr.vt.edu/plt/.

Smokey Bear educational materials such as coloring books and pamphlets are available in limited quantities. Call the education coordinator for details.

A Virtual Tour of the Forest: Teacher's Guide, a 50-page booklet and accompanying CD suitable for middle school instruction. Includes sections on forests, harvesting trees, fire, water quality, and more. Available while supplies last through the "Forestry Web Store" at the Department's web site.

Discovering the Urban Forest Activity Book, a 24-page collection of puzzles and challenge sheets for grades 4-7, developed by the South Carolina Forestry Commission.

Additional Resources and Agencies

Virginia Department of Game and Inland Fisheries—your state wildlife agency, dedicated to maintaining optimum populations of all species and to providing opportunity for the public to enjoy wildlife—Richmond headquarters (804) 367-1000, or www.dgif.state.va.us

Forest and Tree Health publications and fact sheets—available at the U. S. Forest Service-USDA Web site, www.na.fs.fed.us/spfo/pubs/misc.htm.

Natural Resources Conservation Service-USDA
www.nrcs.usda.gov/NRCSorg.html.

National Association of Conservation Districts www.nacdnet.org or the **Virginia Association of Soil and Water Conservation Districts** www.vaswcd.org—forestry notes and project updates.

Virginia Cooperative Extension Service www.ext.vt.edu/ has an extensive collection of articles and information sources, accessible through its search feature.

Virginia Tech Dendrology Site
www.cnr.vt.edu/dendro/wwwmain.html contains fact sheets, leaf and twig i.d. key, an "Ask Dr. Dendro" page, and other information and interactive exercises about trees and forests.


Virginia Forestry Association
www.vafaforestry.org.

Carol Heiser is a Wildlife Habitat Education Coordinator with the Virginia Department of Game and Inland Fisheries.

David Coffman is the former Conservation Education Coordinator for the Virginia Department of Forestry in Charlottesville.

Annual Report To The Stockholders

by Bill Cochran

 **W**inter is an ideal time for woodland owners to take an inventory of their property. The dormant hardwoods offer easy viewing against the faint-blue sky, their leaves now crunching underfoot rather than being held against the horizon like a million green-gloved hands. First, I spend time studying the 10-year management plan of our tree farm to see where we stand: what has been accomplished, what hasn't; what is working, what isn't; what section of road needs work and what pine patch is due a thinning.

Then I go afield, not with a ledger or laptop, but a shotgun. These inventories, understand, are serious, but they also offer a good opportunity to send a grouse airborne. As a rule, there is little concern of being weighted down with game in my vest.

The thunderous flush of a grouse is apt to occur along the edge of one of the seeded roads that snakes through our mountain property. Or, even more likely, where we commercially removed some hardwoods. The reason is, the sun gets to smile on the forest duff to stimulate the kind of plant growth grouse need for food, cover, and escape from predators. These areas also are home to deer, turkey, bear, rabbits, and a variety of songbirds that benefit from a regenerating forest. The chainsaw is one of the best friends that wildlife has. It is a dinner bell to deer and grouse.



People like my family own about 77 percent of the forests in Virginia. There are some 400,000 of us who manage 16 million acres. In comparison, the timber industry owns about 10 percent and the government—state, federal and local—owns 13 percent. That makes the task of the private landowner pretty important. So how well are we doing?

You might call this my annual report to the stockholders. It's not just to family members or the forester who drew up our management plan, but also to deer, bear, turkey, grouse, squirrels, songbirds, and the hikers, hunters, anglers, and Sunday afternoon drivers who benefit from our place and the management we apply. So here is my report, an update from the one published in *Virginia Wildlife* 10 years ago. A decade is miniscule in the life of a forest, a mere wink of an owl's eye, but I am proud to report that some things have happened.

The stems of the white pines we planted a number of years ago have

grown tall and thick and look more like a serious stand of timber every year. We planted by hand several patches of them, roughly 10 acres apiece, in fields where my ancestors pastured sheep and cattle. The pines came into our life as bare-rooted seedlings, 8 to 12 inches long, a burst of green needles wrapped around a small stem and emitting the aroma of Christmas. You could put a bundle of 1,000 on your shoulder without staggering.

My great-great grandpa bought this land in 1838, which means a walk through our woods is a walk into history. He paid for it with "50 venison saddles," according to the yellowing pages of the county history book. He was an honorable man who lived well before the time of modern game laws.

Our name is the last recorded on the deed at the courthouse. Having just passed my 65th birthday, I realize, more than ever, that ownership of family land is a fleeting thing. It is like a baton thrust into your hand for a brief time that you run with, striv-

ing to do well, to carry on the tradition, to pass what you received on down the line a little better than how you found it.

For most of us, farming is something done on weekends, but that doesn't mean it isn't in our blood. We don't even live on the property, so we can't raise cattle or cultivate row crops. We operate the land as a certified Tree Farm, where conservation, land stewardship, and good timber and wildlife practices are followed under the multiple-use concept.

Tree farmers nowadays not only have to deal with woods, water, wildlife, fire, weather, insects, and diseases, but also with outsiders who want to mandate what can and can't be done with our property because their notion of good stewardship differs from ours. They figure we don't have the gumption to make prudent decisions about the land. I say they are wrong. What they fail to realize is that the moment we got the land we had the urge to take care of it, to nurture it, to pre-



Wild turkey. ©Maslowski Photo

Like any Fortune 500 company, forestland, when properly managed for a "diverse portfolio," such as scenic beauty, recreation activities, clean water, wildlife habitat, and forest products, can return valuable dividends which are shared by both the landowner and the "stockholders."

serve it, because frankly we love it and it is a part of us, like family, like the blood running through our veins. Outsiders who covet to manage our property in abstract don't understand this.

Few things remind you more of your fallibility than owning a farm and raising trees. You plant trees and do timber stand improvement work more for your children and your grandchildren than you do for yourself. It is an act of faith and goodwill; even so, you'd be surprised what a difference you can make in your life span.

When the land became ours, we did a lot of reading on forest and wildlife management; we attended seminars and took field trips to see what others had done. We had some strong ideas about what we wanted to do with the property, but we recognized that we needed help. We signed onto the Forest Stewardship Program and hired a consulting forester to make a formal management plan.

There have been programs

through the years to assist private woodland owners, and this approach has been expended by the Farm Security and Rural Investment Act of 2002, succinctly known as the "Farm Bill." For information, start with the nearest office of the Virginia Department of Forestry or your Agriculture Extension Agent or Natural Resource Conservation Service office.

We told our forester that we wanted to make a profit from some carefully planned timber sales, now and in the future. We wanted to leave our woods in good shape for our son. We wanted to benefit wildlife. We wanted a decent road system. We wanted to protect water sources and avoid erosion and other watershed degradation. We wanted our woods to have diversity and that included preserving a chunk of mature oaks, which are the nearest thing we have to old growth. We wanted to plant pines in several fields, some for timber, others for Christmas trees. We wanted to look at our woods and be proud of what



Whitetail fawn. ©Bill Lea

we saw. If there were cost sharing funds available to help us meet our objectives, we wanted to go after them.

The plan came with graphs and maps and a 10-year time frame to meet management recommendations. It was like a woodland owner's manual, and it was up to us to carry out this directive.

On my inventory hike, I see that wildlife is taking advantage of the hawthorns, wild grapes, and other soft mast we have preserved. Old tree snags are popular with woodpeckers and cavity-nesting birds, including owls. A bear has taken a special interest in the apple trees we planted. Deer are doing well in a timber sale site, where there is plenty of browse for filling bellies and saplings for polishing antlers. Turkeys benefit where trees and other plant growth is in a variety of sizes, ages, shapes, and species that helps these birds throughout their life cycle. Wood thrush sing their flute-like melody in the old growth, and warblers scamper about in the new growth, as do grouse. It is a matter of diversity.

Most stockholders appear to be happy, but on a tree farm there's always room for improvement. The job never is complete. You won't hear a tree farmer say, "I'm finished." □

Bill Cochran is a "Tree Farmer" and host of the popular outdoor Web site www.bill-cochran.com.



©David Coffman, VDOF

The future of our forests depends on what we do today. Native Americans passed on their tradition of land ethic by teaching that we do not inherit the land from our ancestors, we borrow it from our children.



James E. Edmunds

by Emily M. Grey



I'm the most blessed person in the world," stated James Easley Edmunds, hugging his handsome three-year-old son, Paul.

After exploring the 5000, more or less, acres he inherited from his father, this writer would tend to agree. Yet, in some respects, James has hoed a tough row. After the freshman had spent only nine weeks at Virginia Tech, his father passed away. James decided to postpone his education and help his mother manage the family farms.

Land stewardship is nothing new to the Edmunds. James' grandfather (Paul Carrington Edmunds, Sr.) managed land, including what is now called Faulkland Farms, for Colonel Ira Vaughn.

"In the mid-1970s, I worked with James' grandfather to control the southern pine beetle epidemic," stated Larry Layman, Virginia Department of Forestry (VDOP) Manager for Halifax County. "His staunch philosophy was to replant cut timberland."

James' father (Paul C. Edmunds, Jr.), a dairy farmer, loved to hunt rabbits. The "habitat" he created also benefited quail and deer. Much of this land was reserved in the USDA's CRP (Conservation Reserve Program) soil bank to control erosion. "James' father is where wildlife habitat management began," Layman continued. "I recommended tree plantings and pine stand management at various stages."

Thus, the Edmunds family laid a

solid land management plan prior to VDOP's Stewardship Program. Although James does not partner with the program, he receives suggestions and comments from Layman on harvesting, herbicidal treatments, thinning, controlled burning, and reforestation. His long-term goal is to sustain his pine plantation to produce a continuous supplemental income.

Today, James raises black angus beef cattle and engages in timber production.

Three of his properties, Dryburg, Elm Hill, and Sugar Shack, are enrolled as tree farms.

"It is my obligation and hobby to plant for wildlife," James explained. "Hunting is my way of inventorying all I plant."

Seven Farms

Halifax, the Commonwealth's third largest area-wise county, has some of the nation's richest farmland. Turbeville, Virginia, where James' cabin is located, is known as the "Cantaloupe Capital of the World."

Like all other regional farms, the Edmunds' seven properties were working tobacco farms. In time, they were converted to cattle pastures and timberlands.

For a few months these plantations became hunting preserves. James still shares his land with respectful hunters.

Bellevue, Creekside, Elm Hill, and Riverside are featured on the annual historic, springtime garden tours. These, along with the other three properties, offer a unique nostalgic grandeur and teem with wildlife.

Sugar Shack

Last year, 1100-acre Sugar Shack became the first farm in Halifax County to have a conservation ease-

ment (with Natural Resources Conservation Service). It is also the earliest land in Halifax County purchased by the Edmunds family.

The USDA's Conservation Reserve Enhancement Program (CREP), an impetus for improving water quality, has benefitted hardwood stands and riparian wildlife for two consecutive years. As a result, 1000 acres of loblollies and mixed hardwoods and 100 acres of open field abound.

Silver queen corn, soybeans, and volunteer wheat dressed the rich terrain last May. A pair of pileated woodpeckers disappeared into the mature forest while three jakes fed in the field.

"Wheat prevents vetch and other vines from matting," explained James. "It yields excellent turkey and quail nesting and cover. Deer prefer oats over wheat about two to one."

"Soybeans run along clean ground about the time quail chicks hatch," he added.

In February, James burns under-

agement tool gives him something to look forward to between deer and spring gobbler seasons.

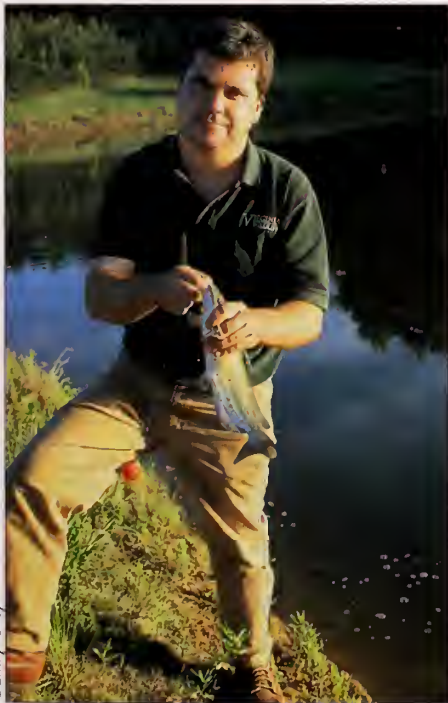
"Burning facilitates forestation and is cost-effective because other vegetation is controlled," said Layman. "The area should be reburned about every third year."

Virginia creeper, poison ivy, and other vital wildlife foods surfaced through last winter's controlled burn. James' favorite food plot, which flourishes on each of his properties, consists of winter wheat, crimson clover, and Austrian or winter pea.

"It's so perfect," he said. "I plant it in September, and it comes up fast. It is relatively drought resistant and produces tremendous forage, protein, and green into winter."

"The harder it is grazed, the thicker it comes out. In spring, it begins to grow. Deer don't bother the early head. Quail chicks and turkey poults scavenge for insects on the clean ground with overhead protection. Deer bite into the head and drop seeds for turkeys."

"It is easy to maintain. It also con-



James Edmunds relies on his farm ponds not only for great fishing opportunities, but as a valuable water source for irrigation, drought relief, and fire control.



It is essential that landowners make sure their land is secure for farms, forests, and wildlife and not subdivided or paved over by progress. With the help of open space conservation easements the rural landscape of Virginia can be preserved.

trols Johnson grass which does not usually appear until after July. I bush hog the plot in August," he added. "No mowing or bush hogging is performed during nesting season."

To create additional cover, James plants USDA's WHIP (Wildlife Habitat Incentive Program) strips. These shrub borders consist of indigo bush, silky dogwood, hazelnut, American plum, sawtooth oak, common apple, wild pear, and bicolor and Korean lespedezas. Saplings are protected from nibblers and the elements with durable plastic cones and wire. WHIP pays 75 percent of wildlife habitat installation such as controlled burning, seedling costs, and labor.

Crops are rotated as follows: $\frac{1}{3}$ spring annuals, $\frac{1}{3}$ fall annuals, and $\frac{1}{3}$ fallow. Spring annuals include millets, sorghums, soybeans, buckwheat, and black oil sunflower seeds. To discourage noxious weeds, fertilizer is not applied in the fall.

This land steward is extremely pleased with his crop survival rate. He says that Sugar Shack draws wildlife all the way to the Town of Halifax because there is no mast or other natural food en route.

"I don't think you'll find a better balance anywhere of timber and wildlife habitat," Layman concluded.

Elm Hill

Part of a land grant from King George II, Elm Hill was purchased



©Emily Grey

by Nicholas Edmunds (James' ancestor) for 12 pounds and five schillings. The property was sold several times until James' father reacquired it in the mid-1980s.

Today, a brick mansion and a smaller dwelling preside over the rural retreat. Approximately 50 acres are planted in wildlife annual food plots while water covers 75 acres. Upon my arrival, a great-horned owl, with a snake in its beak, flew over while a beaver swam in the distance.

This 1,000-acre parcel won the Progressive Farmer's wildlife stewardship award in the farm pond category about six years ago. Anglers, given a combination, deposit \$25 per day in an honor box to fish for shellcrackers (sunfish, bluegill, and bream) in three of the seven ponds.

The Virginia Department of Game and Inland Fisheries (VDGIF) has assisted with the Deer Management Assistance Program at Elm Hill for nine years. This agency has also helped with quail management, warm season grass plantings, and game law enforcement.

Bellevue and Dryburg

In 1950, James' grandfather purchased and remodeled 250-acre Bellevue. This 1820 brick mansion has been James' main residence for 32 years.

With cost sharing assistance from a variety of government funded programs, wildlife habitat improvement practices can be completed as recommended in a Forest Stewardship Plan. Seedlings beneficial to wildlife can be purchased from VDOF nurseries. Below left: Wild turkey poult.

The farm is a blend of pasture, annual food plots, and loblolly stands which James' grandfather planted. A fallow field with edge attracts nesting and foraging turkeys and quail.

The elder Mr. Edmunds paid three dollars an acre for Dryburg. This 1,100-acre parcel has a commanding 35-acre pond. Approximately 1,030 acres is pine plantation while 40 acres thrive in wildlife food plots. Hunting, hiking, fishing, picnicking, swimming, kayaking, and wildlife watching are amongst the myriad outdoor activities enjoyed here and at the other farms.

Riverside and Creekside

James' father acquired 700-acre Riverside in a land trade. Amidst ancient oaks is a two-story white farmhouse predating the 1780s.

Peafowl and 200 head of cattle roam on this former dairy estate. Buckwheat bloomed in the mid-spring fields. Duck potato and wood ducks prospered in the 100-acre wetlands, converted from a floodplain through the USDI's Part-



Wild turkey poult. ©Lloyd Hill



©Maslowaki Photo

ners for Wildlife Program and cost sharing with Ducks Unlimited (DU).

The Norfolk and Southern Railroad formerly crossed through this stretch and Creekside along the Dan River. The Old Trestle (Spanish) Bridge still arches over Birch Creek. No surprise that the James Edmunds family has adopted part of historical Riverside Road.

Five hundred-acre Creekside, with a Georgian brick mansion where James' mother resides, features mixed hardwoods, a pasture, and a heavenly countryside view. It also has a water impoundment partnership with the USDI and DU. The Virginia Birding and Wildlife Trail will pass through here and Riverside.

Leaving selected den trees standing in a forest or wetland can provide homes for wildlife, such as squirrels, raccoons, songbirds and waterfowl, like these juvenile wood ducks.

Hangover Ridge

Blackberries, ponds, rolling meadows, and bluebird boxes frame 700-acre Hangover Ridge, once a bachelor pad for James' father. In 1998, James and wife Jennifer built their dream home, a stone and log cabin with a balcony and turkey weather vane atop the roof. The dwelling overlooks a grape arbor, waterway, and woodlands. A smaller guest cabin faces a field and pasture.



Lee Walker

Even if you don't own land, you can support the principle of land stewardship by joining conservation organizations.

We caught enough grain-fed catfish to feed five for dinner. Shell-crackers and a largemouth bass joined the feeding frenzy at another pond. As darkness crept in, only rustling leaves, lowing cattle, wind chimes, and owls sounded.

Community Service

Like his grandfather, great uncle, and father, James received the 1989 Conservationist of the Year Award. In 2001, he was honored with the Virginia Chapter of The Wildlife Society's A. Willis Robertson Award for outstanding wildlife management and conservation practice on private land in Virginia. He also serves as a member of the Virginia Board of Forestry, the National Wild Turkey Federation, and Halifax County's Board of Supervisors.

This conservationist especially enjoys helping children. Through the Halifax County Sportsmen Club, kids from the Patrick Henry Boys' and Girls' Homes have enjoyed Fishing Day at Elm Hill for the past 20 years. The Virginia Wild Turkey Federation sponsors a special Jakes Day for kids with VDGIF-supervised archery, sporting clays, and electronic dart fishing events.

Tours are offered through the Virginia Tech Extension Service. James hopes that landowners who see the benefits of wildlife management on his farms will try to make a difference.

"If you have limited land or funds, the best thing to do for wildlife is spray your field with Roundup in mid-September," explained James. "This will kill fescue, wire, and Johnson grass and favor annuals such as vetch. Open pasture is worthless to wildlife.

"There are bargains on last year's seeds," he continued. "Broadcasting more pounds per acre assures greater germination.

"Make every acre count and produce its maximum potential," advised James Edmunds. "Do this by implementing a plan." □

Emily Grey is an outdoor writer, photographer, and attorney from Virginia's Eastern Shore.

Hot Methods

by Nelson Lafon

Did that timber cut along the road to your campsite devastate the wildlife habitat? Did that forest fire on the mountain above your deer stand last year ruin the woods? Anyone who has spent much time outdoors has probably asked these questions.

It is true that timber harvesting or fire can alter the forest, often in ways we humans find unattractive. Cutting or burning can remove plants that animals need for food and cover. However, as an outdoors person, you can vouch for the fact that nothing in nature stays the same. You have seen saplings as thick as hair on a dog's back—in that brushy place where you jumped the snoozing buck or grouse—a few years following a timber harvest. You have seen the flush of wildflowers and succulent grasses only weeks after a fire has burned through the woods. If you care to look a little more closely, you will find that cutting and burning are not all bad. In fact, both are critical tools for renewing the forests and creating diverse wildlife habitats.

Disturbances are a natural part of all ecosystems. Fire, ice, wind, insects, disease, and death from old age have shaped the forests in Virginia for eons. Native Americans have played an important role in eastern forests for thousands of years. Eastern tribesmen frequently burned large tracts of forests to improve wildlife habitat and to

clear land for villages and agricultural fields. Even the extinct passenger pigeon, once numerous enough that flocks darkened the sky, impacted our eastern forests dramatically. Twenty-thousand-acre blocks of forest were periodically killed from too many nutrients—those deposited night after night by millions of roosting passenger pigeons!

Were these forces good or bad? Any such disturbance that kills older trees, removes dense vegetation near the ground, or prepares a new seedbed makes way for a new forest. Are natural disturbances better or worse than timber harvesting or controlled burning as practiced under modern, scientific forestry and wildlife management? Answers are value-laden and cannot change an ecological fact: forest disturbances will happen, and they are necessary for the diversity of life on our planet.

Some plant and wildlife species cannot survive in open fields. Others cannot survive under the closed canopies of our eastern hardwood forests. Such beloved native species as bluebirds, bunnies, and blackberries could not have existed in the mythical, unbroken "pristine forests" some say our forefathers encountered. More wildlife species that need clearings, brushy habitats, or open forests are suffering population declines than species that need mature, closed-canopy forests. Black bears, wild turkeys, wood thrushes, and other species we generally think of as solely forest dwellers also use timber cuts, burned areas, and other forest openings to feed on insects and berries.

Ironically, even some of the towering trees that now comprise our old-growth forests (e.g., oaks, hickories, and yellow poplars) cannot successfully reproduce themselves in their own shade! Disturbances that enable sunlight—the driving force

Prescribed burning increases the fruit production of native species, such as huckleberries, blackberries, and wild grapes. Screech owl painting © Jim Wilson.



For Biodiversity



for all life on earth—to reach the forest floor are necessary for oak regeneration. Oaks and other sun-loving trees are important to humans for timber and vital to wildlife for acorns and other food. Whether in forest openings or beneath widely spaced trees, sunlight also promotes grasses, forbs (broadleaf plants), shrubs, and vines that provide food and cover for a variety of wildlife species. Today, timber management is used to control the amount of sunlight available to forest plants. Thus, harvests can mimic natural disturbances while providing wood products necessary for humans.

If timber harvesting can be used to modify the level of sunlight, prescribed burning can be used to control the growth of vegetation. Burning increases the vigor and palatability of desirable grasses, seed-producing forbs, browse (woody sprouts), and wild berries. Fire-stimulated legumes like partridge pea and beggar lice harbor abundant insects and seeds for quail and other ground birds. Intense fires are necessary for seed germination and seedbed preparation in certain pine species. Cooler fires that creep across the forest floor favor the establishment of oak seedlings over the less valuable and less fire-hardy maples, poplars, and birch. New tree sprouts and lush ground cover use phosphorous and other nutrients released from burned organic matter into the soil. Controlled fire consumes flammable materials on the forest floor, reducing the potential for major, uncontrolled conflagrations like those witnessed this year in Colorado and Arizona that destroyed human homes and wildlife habitat. Fortunately, most wildfires in eastern North America burn through leaf litter on the ground without killing the larger trees.

Although few animals and people are killed directly by even the largest forest fires, we must remember to

treat fire as the extremely powerful natural force that it is. If you are interested in burning for wildlife on your property, please consult a professional forester or wildlife biologist first. Just as your doctor only prescribes a strict regime of, say, two tablets a day without milk, professionals only prescribe fire under certain conditions of wind, temperature, relative humidity, etc.. A wise steward realizes that, like medicine, there is a time and a place for fire, and a time and a place for no fire.

Likewise, discretion is necessary in selecting the timber harvesting technique, if any, most appropriate for your property. Clearcutting, the removal of all trees in an area at once, is only one of several kinds of timber harvests. Selective harvests that leave many of the trees standing are better for certain species of wildlife, such as red-eyed vireos, scarlet tanagers, and other birds that need large tracts of unbroken forests. The edges of clearcuts and other forest openings, while beneficial to many wildlife species, may lead to lower nest success in some forest birds. This impact is more of a concern in the smaller, more isolated patches of forests in the northern Piedmont or Tidewater than in the more continuous forests of western Virginia. Therefore, we need

to balance clearcutting—which is beneficial to many of the declining species that require open habitats—with other harvest practices, forest preserves, and other land uses to ensure that habitat is provided for all species across the landscape.

So now we come to the bottom line for preserving Virginia's rich biodiversity—the variety of plants and animals native to our state. The more habitat types we maintain across the landscape, the more types of wildlife and plant communities we can sustain for the long-term. Diverse stages of plant growth are just as important as many different species of plants. Well-planned prescribed fire and timber harvesting are compatible partners in creating the mosaic of habitats needed to support both game and non-game species in Virginia. Our stewardship will ensure that forestry is a tool, not a threat, in wildlife management.

As a user and a steward of Virginia's forests, please take the personal responsibility to learn the facts about timber harvesting and explain them to others. And remember, only you can prevent fire from having a bad name! □

Nelson Lafon is the VDGIF forest stewardship biologist based in Powhatan.



©David Coffman, VDOF



©Bill Lea

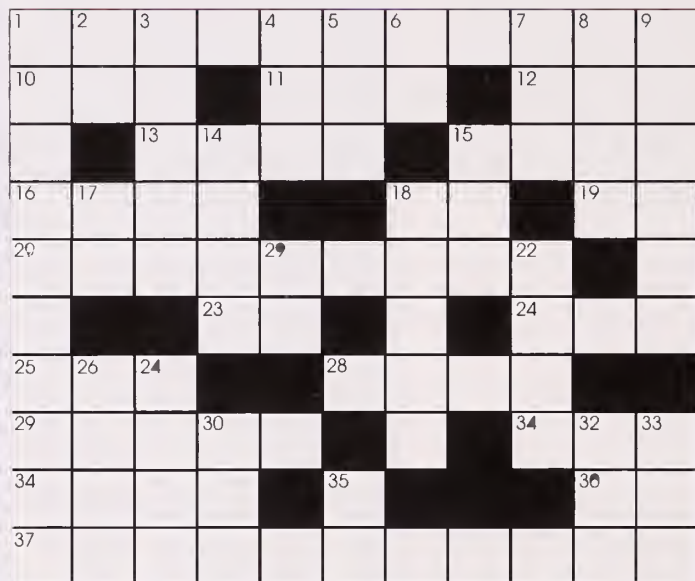
Fire is a valuable tool that should only be used under the proper guidance of trained professional resource managers. Right: Prescribed burning removes ground clutter and releases nutrients into the soil, allowing new growth of plant life making it easier to plant pine seedlings.



Journal



BYRD
NEST



CROSSWORD

ACROSS

- 1 Worm-like larva of a butterfly.
- 10 She, (objective case).
- 11 Used to express pain, dismay, disappointment; (pl).
- 12 Advanced degree or church denomination; (abbr.).
- 13 Assistant or helper
- 15 The same book, chapter, page; (abbr.; latin).
- 16 Start a water voyage.
- 18 To perform an act, duty, role.
- 19 State on 1 Down, (abbr.)
- 20 Virginia mountain.
- 23 Region or direction; (abbr.) or in such a manner.
- 24 Medium through which radio waves are transmitted.
- 25 Federal agency (abbr.).
- 28 Raccoon, slang.
- 29 To put fear to rest, to calm, to quiet.
- 34 Boat stabilizer.
- 36 Trains travel it (abbr.).
- 37 Squirrel.

DOWN

- 1 Virginia bay.
- 2 At the age of; aged (abbr.).
- 3 Appalachian ——— ; it goes through Va.
- 4 Fishing reel attachment.
- 5 Joe- ——— weed.
- 6 Island, Isle (abbr.).
- 7 Hunting dog (abbr.).
- 8 In the middle of, surrounded.
- 9 Fish species.
- 14 Suffix expressing capability, aptitude, (pl).
- 15 Electrically charged atom.
- 17 Suffix forming nouns from verbs.
- 18 Hunting lure.
- 21 To move or proceed.
- 22 Give a jerk or vigorous pull
- 26 Beg; an appeal or entreaty.
- 27 Malt beverage (pl.).
- 30 Alternate (abbr.).
- 32 Type of savings account (abbr.).
- 33 Attempt to test quality and accuracy.
- 35 Elder person (abbr.).

(Answers in February 2003 Virginia Wildlife Magazine)
Marika Byrd is a freelance writer, crossword aficionado, and member of
Va. Outdoor Writers Association Inc.

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RECIPES

by Joan Cone

Virginia's Finest Foods for the Holidays

Virginia's Finest trademark program, introduced in 1989, enhances the economic opportunities of Virginia agricultural producers. Today there are more than 500 participants producing food products, fresh produce, hams, farm-raised fish, and more. Three of these products are used in our holiday recipes.

Menu

Chinese Scallop Broth with Snow Peas
Virginia Country Ham
Vegetable Spoon Bread
Sweet Potato Pecan Bread

Chinese Scallop Broth with Snow Peas

- 4 cups chicken broth
- 1½ teaspoons minced fresh ginger root
- 2 cups chopped snow peas
- 4 ounces scallops, diced
- 1 tablespoon soy sauce
- 1 green onion, chopped

In medium saucepan, bring chicken broth and ginger to boil. Add snow peas, scallops, and soy sauce. Reduce heat and simmer for 2 to 3 minutes or just until scallops are opaque. Serve sprinkled with green onion. Serves 4 to 5.

Virginia Country Ham

Because Virginia cured hams are dry salt cured; they may need to be soaked before cooking. The length of time of soaking is important and should be influenced by the individual's taste for salt. Longer soaking results in milder hams.

To Prepare: Follow instructions on wrapper or use the following directions. Scrub ham thoroughly in

warm water, using a stiff brush. Soak short cure ham 4 to 8 hours or do not soak if full flavor is desired. If a milder flavor is preferred, soak ham 12 hours or longer. Soak long cure ham in cold water 10 to 12 hours or overnight; change water after 10 hours. The ham may be scrubbed after soaking.

To Cook: Place ham in a large cooking utensil, skin side down. Cover with fresh water. Bring water to 180°F. (not quite simmering). Then allow to simmer, covered. Add hot water when necessary to keep ham covered. Cook until done, about 20 to 25 minutes per pound to 160° F. internal temperature. The ham is cooked when the flat (pelvic) bone can move easily. Lift ham from the utensil. Remove skin, allowing ¼-inch fat covering on ham for scoring. Dot surface with cloves if desired and sprinkle with brown sugar (or preferred glaze) and brown in a 400° F. oven approximately 15 minutes.

Note: Properly wrapped, cooked country ham slices can be refrigerated for three to four weeks at the most. Flavor and color changes may be noticeable by the fourth week.

Vegetable Spoon Bread

- 1 package (10 ounces) frozen chopped spinach, thawed, and well-drained
- 2 eggs slightly beaten
- 1 can (8¾ ounces) cream-style corn
- 1 cup sour cream
- 2 tablespoons butter or margarine, melted
- 1 package (8½ ounces) corn muffin mix
- 3 process cheese slices, cut up

Mix spinach, eggs, corn, sour cream, and butter in large bowl. Add muffin mix and process cheese; mix well. Pour into a greased 9 x 5-inch loaf pan. Bake in a preheated 350° F. oven for 1 hour or until top is golden brown. Makes 6 servings.

Sweet Potato Pecan Bread

Here is another delicious recipe, using Virginia sweet potatoes, from Marika Byrd, a regular contributor to *Virginia Wildlife*.

- 2½ cups flour
- 1 cup brown sugar, packed
- 3½ teaspoons baking powder
- 1 teaspoon salt (optional)
- ¼ teaspoon pumpkin pie spice
- 3 tablespoons salad oil
- ¾ cup orange juice
- 1 cup baked or canned sweet potatoes, mashed
- 1 egg
- 1 cup roasted pecans, chopped

Preheat oven to 350°F. Grease and flour a 9 x 5 x 3-inch loaf pan or two 8 ½ x 4 ½ x 2 ½-inch loaf pans. Measure all ingredients into a large mixing bowl. Beat on medium speed for ½ minute, scraping sides and bottom of bowl constantly. Pour batter into pan or pans. Bake for 55 to 60 minutes or until a wooden pick inserted in center comes out clean. Remove from pan and cool thoroughly before slicing. □



Virginia's Finest



On The Water

by Jim Crosby

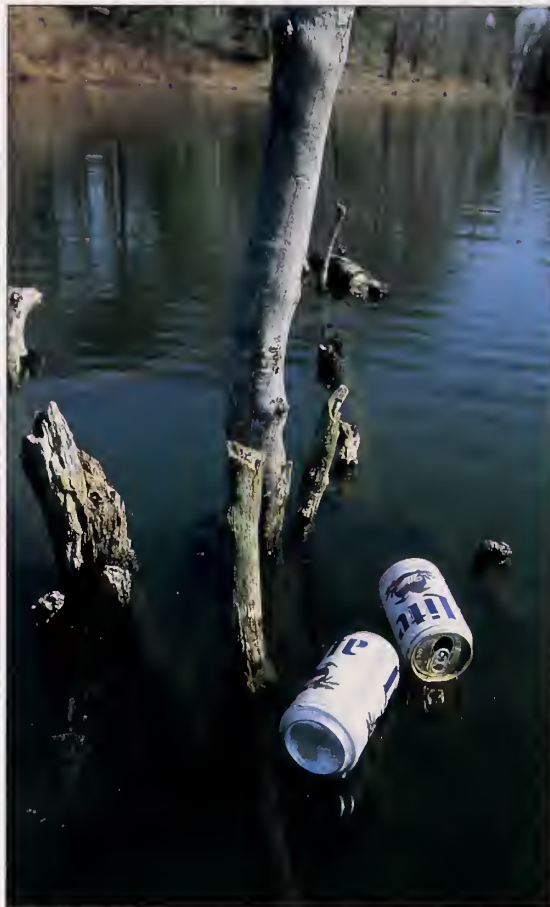
Our Boating Environment

A true boater in the purest sense is one who just enjoys being on the water in whatever craft is available. One who would rather walk the docks of a marina inspecting all the watercraft resting there than knock a ball across the lawns of a prescribed course.

A true boater knows the pleasures of floating free while resting easy and pushing the unpleasant memories of life back to the recesses of the mind. The gentle motion of the water, transmitted to you via the boat, reminds one of a mother's rocking chair. What could be more pleasant?

Picture this in your mind: You are lying out on deck flicking the water with your fingers while staring into its depths, and your mood is destroyed by a plastic bag floating by with the remnants of somebody's lunch, followed by a well-chewed apple core. You think, "How could someone do that?" You contemplate all the ways that garbage could have gotten there.

Some of the garbage in our water arrives there via storm drains and street gutters. Some is tossed there by thoughtless people along the shorelines, as well as over the gunwales of boats. There is nothing that can break the relaxing mood of pleasure boating quicker than having to maneuver through garbage floating on your waterway. Or worse, having to go overboard in



Being good stewards of our fields and forests means making sure we keep our waterways clean. You can make a difference by helping to pick up trash and report sources of pollution in our water resources. Photo ©Dwight Dyke

it to remove a plastic bag from your intake screen, or unwind debris from your prop shaft. Who wants to boat, swim, fish, or just daydream in water polluted with anything unpleasant to the sight and/or smell?

Does that make boaters custodi-

ans of our water resources? You bet it does. If we are to have the pristine waters we all seek, we must all become stewards of our water resources. We must set the example by allowing nothing to go overboard that will pollute. We must set the example by picking up that trash we discover in and on our water. And lastly, we must report sources of pollution not under our control to prevent, stop, or cleanup.

Under the law, it is illegal to put any garbage into the water from a vessel on a lake, river, stream, or any coastal waters up to 3 miles offshore. The BoatU.S. Foundation for Boating Safety & Clean Water offers a "21 Steps" brochure to boaters that will help you with your anti-pollution efforts. It can be downloaded from their Web site [www.boatus.com/cleanwater/environmental] or mailed directly to you.

In the meantime, you can establish a policy on your boat that nothing goes overboard and alert all those aboard to that policy. Make sure your boat's trash receptacle is easily accessible and has a lid to keep light trash from blowing overboard. Order a stock of BoatU.S. bilingual "Stash Your Trash" posters you can distribute to waterfront businesses and boat facilities you frequent.

Boaters arise and let us do our part to ensure we always have pristine waters to part with our keels and flick with our fingers. □



Naturally Wild



story and illustration
by Spike Knuth

Red-cockaded Woodpecker *Picoides borealis*

The red-cockaded woodpecker is seldom found north of Virginia, or farther west than Oklahoma. It is very rare here in Virginia, being found only in Sussex County. It lives primarily in old growth, southern pine ecosystems, preferably longleaf pine, but also shortleaf, slash, and loblolly pines. There was a time when these mature pine forests covered miles of unbroken belts from Virginia to east Texas. By the early 1900s, agriculture and logging had reduced the size of these forests substantially.

Today, trees are harvested in 20–50 year rotations for pulp and paper and for saw timber. The result, of course, has been a continued loss of large old pines growing in open park-like stands, which are needed by the red-cockadeds for nest sites. Normally the clearings around the pines are kept that way by fire, keeping hardwoods from growing up.

These old pines are subject to a fungal disease called redheart. The woodpeckers dig their gourd-like nest cavity down into this rotting heartwood. The birds encourage resin to drip and run down around the outside of the cavity by pecking holes around the nest cavity. This results in glossy, candle-like drippings that dry and form a covering. The resin is thought to be toxic to snakes and discourages them from trying to get at the eggs and young of the woodpecker.

Red-cockaded woodpeckers live in family groups called clans. They require an area of several hundred acres for nesting and foraging. This

area may contain as many as 30 cavity trees used for nesting and is called a colony. A clan consists of up to nine birds, but never more than one breeding pair. The others, called “helpers,” are usually male offspring of one or both breeders. These helpers assist in incubation, feeding the young, and defending the foraging territory.

The red-cockaded is best identified by its white cheek patches, black back with white, zebra-like bars, dull white underparts, and streaks of black on its sides and breast. The male has a small slash of red on either side of its head. Its tail is black with dull white outer tail feathers. The fact that they live in clans and are constantly chasing, chattering, and calling one another, is another good identifying feature.

They often feed upside-down like a nuthatch, and when they back down a tree they do so in jerky hops backward. They feed on a variety of wood-boring insects, insect eggs, and larvae, as well as spiders, lice, crickets, grasshoppers, corn earworms, and ants; they will occasionally eat wild fruits and seeds.

Red-cockadeds nest from April through June, laying two to five eggs. The young hatch in 10 to 12 days and fledge in about 26 days. The young stay with the clan until late summer, at which time the females will leave or be forced out of the clan, hopefully, to form a new clan. Unfortunately, there is less and less suitable habitat for them to spill over into.

While much, if not most, of the decline in the woodpecker's habitat is caused by man, nature plays a part too. Pine bark beetle outbreaks kill many big pines, and in September 1989, Hurricane Hugo, with 135-mph winds, tore into South Carolina's Francis Marion Forest destroying nearly 90 percent of the cavity trees there. Of the estimated 1,900 woodpeckers living there, a later survey showed 63 percent of them were gone! □



Wild Backyard

story and photos by Marlene A. Condon



Virginia Cedar Trees

The very common eastern red cedar (*Juniperus virginiana*) is fantastic for wildlife. Known by many names (such as juniper, red juniper, Virginian juniper, Virginia cedar, red cedar), eastern red cedar is not a cedar at all, but a juniper. The colonists who first observed these plants on Roanoke Island, Virginia, in 1564 noticed the resemblance to true cedars (none of which is native to North America) and thus misnamed the tree.

Eastern red cedar is a wonderful



Male specimens of Virginia cedar are identifiable in early spring when the mustard-yellow pollen bearing cones are visible on the trees.

tree for wildlife (although it should not be grown near apple trees because it is an alternate host for cedar-apple rust—a fungus). Its thick growth provides shelter in wet and cold weather for roosting birds, such as the dark-eyed juncos and white-throated sparrows that spend the winter in our area. Red cedar also furnishes nest sites for such com-

mon suburban birds as northern mockingbirds, American robins, and song sparrows. White-tailed deer eat the twigs and foliage of red cedar. Mammals, such as opossums and black bears and many species of song and game birds, love the fruit.

The ripe fruit of eastern red cedar is berry-like and blue-black with a grayish waxy bloom (a delicate coating on some fruits, such as blueberries), but this fruit is actually a cone! Eastern red cedars are conifers, which means that they are cone-bearing. Cones have many overlapping scales that are normally woody. But in junipers, the scales are fleshy and they have coalesced or fused together, causing the cone to resemble a berry.

Each fertilized cone produces two seeds that are consumed when animals eat the fruit. The seeds pass through the digestive tract unharmed and may produce new seedlings wherever they are dropped. Female cedars produce fruit every year, with heavy crops occurring on three-year cycles. You need a nearby male in order to obtain fruit.

Because our Virginia cedar is so common, many folks consider it a “trash tree.” Perhaps if you have thought that this tree was nothing more than a “weed,” you will now think more highly of it and allow a cedar to grow in your yard. Because cedars make wonderful Christmas trees, Virginia cedar is actually a great tree—for animals and people!



You have to look closely to see the tiny female fruiting structures on Virginia cedar.



Although it resembles a berry, the blue fruit of Virginia cedar is actually a fleshy cone.



The male cones of the Virginia cedar are very small.

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"Conservation
is a state of
harmony
between men
and land."



Aldo Leopold,
A Sand County Almanac

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